

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): An ac generator for a vehicle comprising:
a rotor having field windings and a plurality of fan blades which bend incoming air at a right angle,
a stator including a stator core arranged opposed to the rotor and an insulating coated electrical conductor wound on the stator core, and
a housing directly supporting a periphery of the stator core and protecting the electrical conductors supporting the rotor and the stator, wherein the stator core is constituted by laminated core having a plurality of slots each extending to an axial direction, the electrical conductor is comprised of a slot-in portion located in the slots and a cross-over portion connecting each of the slot-in portions at the shaft end side of the stator, wherein the conductor is formed so that the slot-in portion located in the slots is molded to substantially rectangular in its cross-sectional profile having a longer side thereof in the radial direction of the generator and a shorter side thereof in the circumferential direction before it is entered in the slots and the cross-over portion is substantially circular in its cross-sectional profile, and at least longer side portion of the conductor of the slot-in portion located in the slots has an insulation coating of which thickness is smaller than that of insulation coating in the cross-over portion.
2. (original): An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slots is a substantially rectangular in cross section a shorter side

thereof being in the radial direction of the generator and a longer side thereof being in the circumferential direction of the generator.

3. (original): An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slots is a substantially rectangular in cross section a shorter side thereof being in the circumferential direction of the generator and a longer side thereof being in the radial direction of the generator.

4. (original): An ac generator for a vehicle of claim 2, wherein a conductor of the slot-in portion located in the slots is closely disposed on a line to the radial direction.

5. (original): An ac generator for a vehicle of claim 2, wherein a conductor of the slot-in portion located in the slot is closely disposed on plural lines to the radial direction.

6. (original): An ac generator for a vehicle of claim 1, wherein a conductor of the slot-in portion located in the slot is impregnated with insulating resins.

7. (original): An ac generator for a vehicle of claim 1, wherein the periphery of the cross-over portion is protected by the housing and the laminated core is directly held by the housing made of metal.

8. (original): An ac generator for a vehicle of claim 7, wherein the periphery of the housing is provided with a plurality of ribs and charging air holes or discharging air holes formed between the ribs.

9. (canceled).

10. (previously presented): An ac generator for a vehicle of claim 6, wherein the insulation coating in the slot-in portion and the insulation coating in the cross-over section are made of the same material.

11. (currently amended): An ac generator for a vehicle comprising:
a rotor having field windings and a plurality of fan blades which bend incoming air at a right angle,

a stator including a stator core arranged opposed to the rotor and an insulating coated electrical conductor wound on the stator core, and

a housing directly supporting a periphery of the stator core and protecting the electrical conductors supporting the rotor and the stator,

wherein:

the stator core is constituted by laminated core having a plurality of slots each extending to an axial direction,

the electrical conductor is comprised of a slot-in portion located in the slots and a cross-over portion connecting each of the slot-in portions at the shaft end side of the stator,

the conductor of the slot-in portion located in the slots is substantially rectangular in its cross-sectional profile and the conductor of the cross-over portion is substantially circular in its cross-sectional profile,

the slot-in portion comprises at least one coil element in each of the plurality of slots,

the cross-over portion comprises ends of the at least one coil element,
the ends of the at least one coil element connect the coil element of the slot-in
portion in the plurality of slots,

distances between adjacent, parallel ends of the at least one coil element in the
cross-over portion are different, and

said at least longer side portion of the conductor of the slot-in portion located in
the slots has an insulation coating of which thickness is smaller than that of insulation
coating of each of the ends of coil elements in the cross-over portion.

12. (canceled).

13. (previously presented): The ac generator for a vehicle of claim 1, wherein the
insulation coated electrical conductor has a diameter of 1.6 mm for the cross-over portion, and
the insulation coated electrical conductor is flattened into one direction to a thickness of
1.3 mm for the slot-in portion.

14. (previously presented): The ac generator for a vehicle of claim 1, wherein the
thickness of the insulation coating of the cross-over portion is 50 μm , and
the thickness of the insulation coating of the slot-in portion is 40 μm .

15. (previously presented): The ac generator for a vehicle of claim 8, wherein the
plurality of fan blades draw the incoming air longitudinally from the charging air holes and
exhaust the air through the discharging air holes.

16. (previously presented): The ac generator for a vehicle of claim 1, wherein the
incoming air is bent centrifugally.